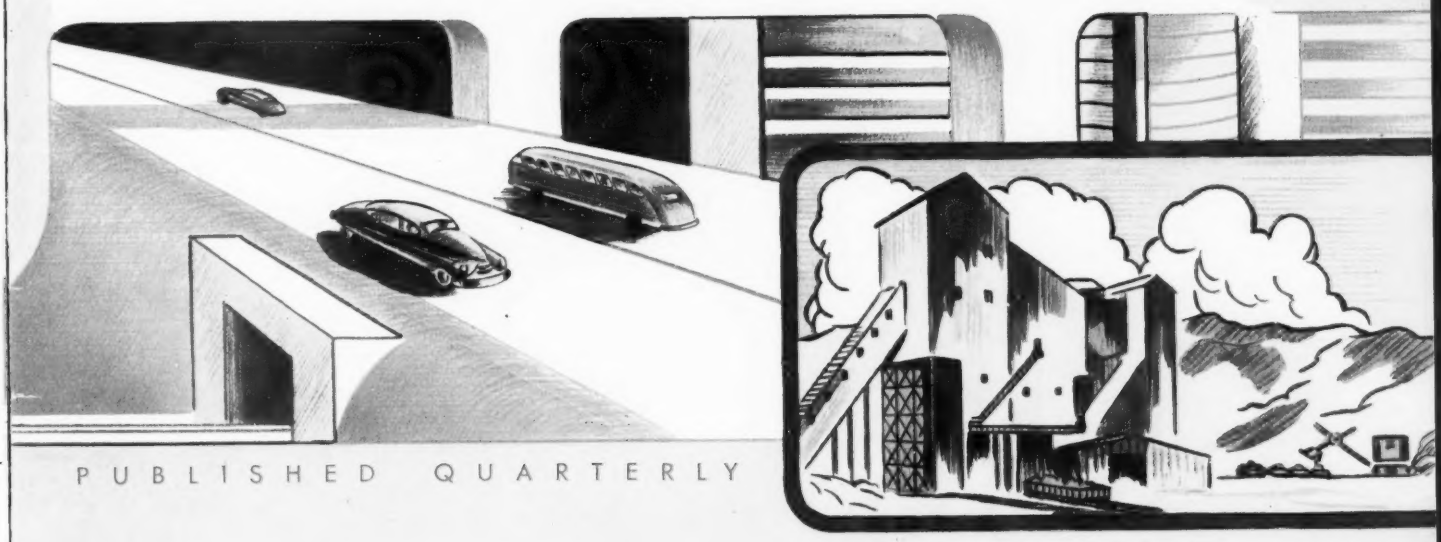
The CRUSHED STONE JOURNAL



PUBLISHED QUARTERLY

In This Issue

December 1948

- **Important Elements in Successful Accident Prevention**
- **New Method of Removing Water from Highways**
- **Testimonial to Nathan C. Rockwood**
- **In Memoriam—Edward G. Lewis**

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The Crushed Stone Journal

Official Publication of the NATIONAL CRUSHED STONE ASSOCIATION

J. R. BOYD, Editor

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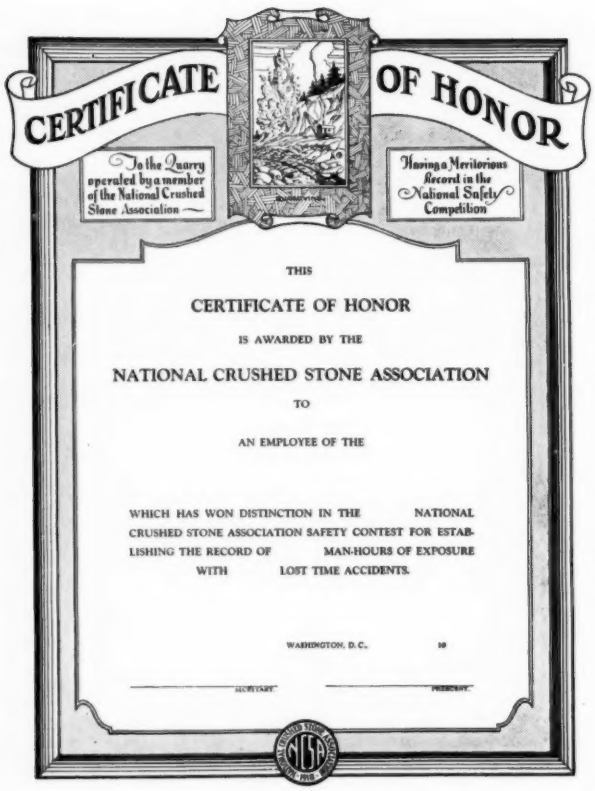
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THE CRUSHED STONE JOURNAL

WASHINGTON, D. C.

Vol. XXIII No. 4 PUBLISHED QUARTERLY DECEMBER, 1948

Important Elements in Successful Accident Prevention

By H. F. YOTTER

Safety Supervisor
The General Crushed Stone Company
Easton, Pa.

• **In connection with the following article it should be of interest to know that the General Crushed Stone Company operated the winning plant in the NCSA Safety Contest for 1927, 1946, and 1947. Obviously, therefore, Mr. Yotter speaks from a background of successful experience in the field of preventing accidents, and his observations should be of distinct interest and value.**

ACCIDENT prevention is primarily a matter of organization and education. It is an essential part and inevitable result of good management. It is so closely linked with other problems of management that effective effort on one will likewise affect the other. Our plan of accident prevention and self-insurance was conceived and instituted by the management of our company and ever since it has had the full support of our executive and operating heads.

Functions of the Safety Committees

In our company we have a General Safety Committee composed of the executive and operating heads of our company, whose function it is to direct and plan our program of safety. This Committee's policies are transmitted to the plant superintendents and local safety committees through the medium of the safety supervisor, who regularly visits each plant.

We have at each operation a safety committee made up of five or six of the key men, including the superintendent. This committee meets periodically with the safety supervisor. At these meetings is reviewed the accident experience of all of our plants since the previous meeting. We have in effect an inspection report form covering some of the principal conditions at the operation, which form is used by the local committee in making its inspection of existing conditions. On these forms are recorded the result of the inspections and the ideas and recommendations of the members of the committee, and such suggestions are passed upon at the committee meetings. General matters of safety are discussed and the members of the committee are urged and expected to present suggestions with respect to unsafe conditions and the safety and health of the workers. Such ideas as are developed at these meetings are then passed on to the other workers by this representative committee.

Responsibilities of Management

The employer is morally obligated to see that his employees are enlightened as to the hazards of their occupation and to make sure that they are active in their efforts to avoid accidents. Management must lead the way and in a manner that the workers will be convinced of its sincerity.

The safety movement generally has taken a firm hold at the top and is infiltrating downward through the organization. This progress of infiltration has been slower in the small plants, and our industry by its very nature is made up of comparatively small units.

One of the most worthy purposes of industry is the conservation of human life and limb. The safety movement is humanly, socially and economically sound and far reaching in its effects. To save human

life is the noblest of all purposes. It embodies the highest ideal of humanity; it conserves the best asset of the nation and provides its best protection. The first law of nature is self-preservation, but, like all of the wonderful advances in human endeavor, it required the vision and faith of far-seeing men to make the safety of workers an essential feature of good management in our industries. The conservation of life and limb is of prime importance to both employer and employee, for death and disability cause loss to both. The solution can be found only in their combined efforts.

E. Z. Cole, Supt. Rock Hill Quarry General Crushed Stone Company

Management recognizes the long established fact that every man in the organization must work for safety if safety is to be achieved. The start, of necessity, is made in the most successful organizations by the chief executive himself. When we say that safety is an executive responsibility we mean not only sincere, continuous support by the chief executive, but we mean that responsibility is shared by every superintendent, engineer and foreman each hour of the day while directing his men. Safety thus has a unique, intimate relationship with management all the way down the line.

The good will value of active safety work stands at a higher level today than at any other time in the whole history of industry.

The key position is held by the superintendent in charge of the operation. His is the task and responsibility of understanding both the management and the worker, of interpreting their motives and aspirations to each other, and of joining them in effective endeavor in the interests of both.

Leadership is that which makes men want to work for the person who displays it and they place themselves willingly under his guidance and control. Leadership is based on confidence and calls forth faith in the leader and submergence to the will of the individual.

Responsibilities of the Superintendent

Underlying the whole problem of good management and constituting a vital part of it is the human element. The superintendent is responsible for the relation between his employer and his own group of workers. It is up to him to create and to maintain the interest and cooperation of every man under his supervision in the everyday problems that confront industry.

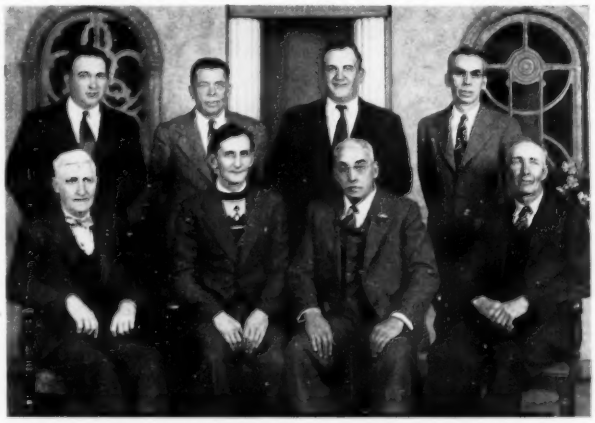
The superintendent is concerned with having his men conform to the rules of the company. He is the "Company" as far as his subordinates are concerned and when he speaks he speaks with authority.

In the hiring of new men, before assigning the workman to any task the superintendent should see to it that the employee is made thoroughly familiar with the correct method of performing the task and then he should be guided until he becomes proficient in performing the operation. It is important that the new employee form correct habits of work under the immediate direction of the superintendent or of an assigned capable and experienced employee.

Consideration should be given by the superintendent to the employee's particular fitness for the job to which he is assigned, and a job where there is greater than ordinary possibility of accident should be assigned only to an experienced and dependable man. A new man should never be given a task involving unusual accident possibilities. In our industry there are numerous hazards involved and the superintendent must guard against these hazards by discovery and correction; the worker must be observed and must not be permitted to take undue chances.

Proper Instruction Necessary

We cannot expect safety performance if the worker is not properly instructed how to do his job.



Safety Committee—General Crushed Stone Co. Seated, Left to Right, John Dillon, Willis Frank, James Gross, Jesse Gross. Standing, Left to Right, Joseph Deose, E. Z. Cole, Daniel Deose and John Shields

Safety engineering,—that is, physical improvement in the plant, merely makes the whole undertaking easier and more certain. Too many people have concentrated on the problem of the plant and have not given adequate thought to the problem of the individual. It is axiomatic that if there were no human beings there would be no accidents. The individual contributes almost all of the factors necessary to make an accident. You can build a guard around moving machinery but you cannot fence off mental attitudes. It is very important that the worker be reached, as it is the man with the drill, or the bar, or the torch who generally suffers the injury. He is the man who must be thoroughly convinced of the value of the accident prevention program.

Accidents are not inevitable; the only element of luck is in the degree of the injury. Every accident is a symptom of something wrong in the operation—some fault in design, equipment, placement, training, supervision, operating procedures or practices. For every accident there is a cause; the cause of each accident or near accident should be determined and then that cause should be eliminated. Each accident should be used for its educational value in preventing others of like nature. We must accept the fact that rarely is there a good excuse for any accident and there never is any reason for a repetition of a similar occurrence.

Advantages of Self-Insurance

Our company assumed its own compensation risk through authorized and approved self-insurance in two states about twenty years ago and has operated in this manner ever since. During this time we have carried "excess insurance" as a protection against any exceptionally heavy potential loss due to a disastrous occurrence. In the very nature of our business we handle large quantities of explosives and from this standpoint alone it will be realized that the chance of a serious mishap exists.

As the result of carrying our own compensation risk we have effected a saving of somewhat more than fifty per cent of what purchased coverage would have cost us. In this calculation we have included actual compensation and medical payments and reserves and the cost of excess insurance and administration of our safety program.

Besides the financial saving thus effected, we believe that the administration by ourselves of our workmen's compensation has fostered a closer relationship between the company and its employees through the closer contact in the handling of compensation matters and the more intimate relation in following up injury cases among our men. This more personal contact with the injured men by a representative of our company, rather than by an outside party, who is a stranger to the claimant, we believe tends toward a better understanding between employer and employee, largely through the greater personal interest shown and the probably more liberal expenditure for medical, surgical and hospital services, which may result in the quicker rehabilitation of the injured employee and his consequent earlier return to work.

We feel that the reduction of accidents in our company has been the result of the sincere and continued interest of our executives, the careful planning of our accident prevention work, and getting the workmen at our plants to cooperate with us in the prosecution of our program, which is in their interest as well as that of our company.

EMPLOYEES OF ROCK HILL QUARRY OF THE GENERAL CRUSHED STONE CO.
WINNER OF 1947 NCSA SAFETY COMPETITION

New Method of Removing Water From Highways[1]

By F. W. HASELWOOD

District Engineer, Division of Highways
Department of Public Works
State of California
Sacramento, California

EFFECTIVE means of removing and disposing of water that falls on or reaches the highway roadbed from other sources has developed during the years to the status of being fairly well standardized. Variations in details are largely due to climatic or other local conditions. Increasing widths of roadbed, deeper cuts, and higher fills have had their influence on the necessity and type of devices to serve the particular function of roadbed drainage.

Old-timers in the highway service in California, who began at the beginning of state highway development back in 1912, can recall many changes in highway design and construction practices. Some of these changes grew imperceptibly over a period of years, while others were more abrupt. All developed into definite policies sponsored by the ever growing traffic and varying according to climatic, soil, or other local conditions.

Design Important

Drainage practice has received much, if rather belated, attention in the past 10 years, with the result that small drainage structures or devices, commonly designated as culverts, ditches, and gutters, are now better related to the actual service they are to render, with resulting economy. This has been brought about largely in the process of design by giving more consideration to the way water in motion actually behaves under circumstances similar to those under which the culvert or ditch is to function.

Not the least, although probably long and frequently neglected, is that subdivision of roadway drainage that deals with removal and disposal of water that falls on the roadbed or reaches it from the adjacent roadside or cut slopes between the established cross drains.

Early designs solved this roadway drainage by the simple process of ignoring it. Then came the device of sloping the plane of the road surface away from the hillside and allowing the water to spill over the outer edge of the road. As long as fills were shallow and roadbeds were narrow this practice usually worked, although cases of severe loss on roads 10 feet wide have been noted.

More Satisfactory Practice

The more satisfactory practice was the construction of a defined gutter in cut sections with relief by cross drainage at appropriate intervals. This gutter varied in dimensions and design according to local conditions and sometimes was made deep enough to intercept and remove subdrainage.

As roadbeds became wider and embankments higher, the runoff from the outer half on tangents or the full width on superelevated open curves created problems on embankments which required solution.

The writer well recalls the reception of his proposal to construct a gutter along the outer edge of embankments to remove the storm water to a safe point for release. It was one of many simultaneous proposals for the solution of this problem and there eventually developed the now well-known device designated sometimes as a berm, but more commonly as a dike.

Earth Dikes Vulnerable

These dikes, as originally built on the edges of embankments for drainage purposes only, were of earth or imported borrow and were one foot high, one foot wide on top, and four feet wide on the bottom. Earth dikes were sometimes built higher to serve as protection to traffic as well as to control drainage.

Earth dikes, as built in District II in the open range country, were frequently damaged by stock and by erosion. In many cases the earth dikes one foot high interfered with snow removal and were damaged to some extent by snow removal equipment. On one job, to solve the snow removal problem, the dike was made about two inches high and a gutter about four inches deep, with flat slopes, was cut in the shoulder adjacent to the dike with a

[1] Reprinted from *California Highways and Public Works*, November-December, 1948 issue.

blade. This was in easily eroded material in an area subject to very heavy summer showers. This design served its purpose well and was not affected by the trampling of stock. The fills in this area were generally shallow and, in the course of time, the surface material hardened and was covered with vegetation. At present most of these shallow gutters and dikes are hardly perceptible but they are no longer necessary.

Dike Height Lowered

The next step in the development of the earth drainage dike was to lower its height to about eight inches and to continue the shoulder plant-mix over the face of the roadside slope and the top of the dike. This greatly increased the durability and improved the functioning and appearance of the dike.

Simultaneously with this bituminous facing, the all-bituminous mixed dike appeared. This dike was constructed in various shapes from semicircular to trapezoidal, with side slopes ranging from one to one and one-half to one. The all-bituminous dike had a narrower base and required a lesser width of fill or a lesser encroachment on the shoulder width.

The solution of the problem of compacting these dikes was wished onto the contractor, who tried hand-tamping and various mechanical methods with indifferent success. Poorly compacted bituminous dikes were adversely affected by the weather and even by the trampling of stock.

Mechanical Devices

Recently contractors have used mechanical devices for distributing and for finishing and compacting these plant-mixed dikes. As used in District II by several contractors, these devices consist first of a windrow sizer and shaper, which is propelled by the truck that dumps the hot mix into it. This device leaves behind it a smooth, straight and shaped windrow which needs compacting only to provide a finished dike. The compacting device is a tapered, double-walled shell, the front end of which is as large as the sized windrow and the rear end of which is the size of the finished dike. This is fastened to a grader blade and is propelled along the dike by the grader. The weight and the taper provides a high degree of compaction. Attached to the tapered shell is a burner which heats the space between the walls of the shell. Sufficient heat is maintained to provide a hard glaze on all exposed faces of the dike. The result is a well-compacted dike with a hard outer shell that is not easily marred when heavy vehicle wheels crowd against it.

FIGURE 1
Front View of Shaping and Compacting Device Showing Blade Feeding Mix from Material End Dumped on Shoulder

FIGURE 2
Rear View of Device Showing Finished Dike Emerging. Device Is Tapered to Provide Compaction. The Burner Is on the Right and Furnishes Heat to the Shell Chamber Which Aids in Producing the Surface Glaze. Stake on Front Axle of Grader Enables Driver to Follow Guide Line for Proper Alignment of Dike

First Use of Device

The first use of the finishing and compacting device was without the windrow sizer and shaper. Plant-mixed material was dumped in the general position of the dike and fed to the compacting device by the blade of the power grader. The quality of the alignment of these dikes depends on the skill of the driver of the grader in following accurately the guide line or marks set for him.

Accompanying photographs show the windrow sizer and finishing and compacting device attached to the grader blade. The device is similar in some respects to the attachment for a finishing machine,

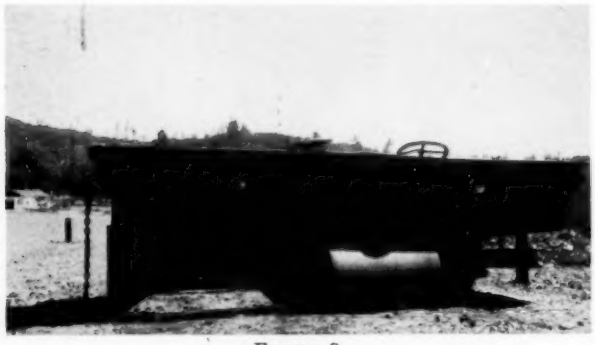


FIGURE 3
Windrow Sizer for Use Ahead of Shaping and Compacting Device. This Is Propelled by Truck Which Dumps Its Load Into Hopper

as illustrated on page 20 of *California Highways and Public Works* for March and April, 1948.

In determining the relative economy or desirability of the bituminous faced earth dike eight inches high and the all-mixed dike four-tenths of a foot high, we find that, after allowing the fill to extend a foot beyond the plant-mixed dike for protection against weathering, the embankment quantities for the two types are identical. The bituminous faced earth dike requires 4.7 cubic yards of compacted earth or imported borrow and 2.5 tons of plant-mix per 100 feet. The all plant-mixed dike required 5.8 tons of plant-mix per 100 ft. As constructed to date in District II, the all plant-mixed dike costs from 5 to 9 cents per lineal foot more than the earth dike faced with plant-mix.

The all plant-mixed dike is more susceptible to being shaped and compacted with mechanical devices, is more durable and sightly, and will require less maintenance cost.

In addition to its drainage function, the plant-mixed dike is a warning to traffic of the limit of the traversable area. Its value for this function can be increased, particularly for night driving, by painting the roadside face white or by the installation of reflectorized guide posts. District II practice in the installation of guide posts in the berm is shown in accompanying photographs. The use of reflectors on the guide posts is very helpful where heavy fogs occur and the driver may otherwise lose sight of the posts as well as the traffic stripe.

Along with the drainage provision on embankments, as provided by plant-mixed or other dikes, has come the practice in some locations of redesigning the gutter through cuts and lining it with plant-mix. The operation of spreading, shaping and compacting the mix to fit the gutter can and has been done mechanically. By providing heat, weight and a taper on the shaping device, similar compaction and surface glaze can be secured as on the dikes. The use of special equipment for this purpose would be encouraged if a standard shape for both dike and gutter were adopted.

Paved Gutters

The paved gutters as usually designed function well when cut slopes are stable, are not too high and are fairly flat, preferably not steeper than one and one-half to one. When slopes are steeper, cuts are deeper and material is rocky even though comparatively stable the falling of rocks loosened by frost or erosion into a paved shallow gutter usually results in many rocks coming to rest on the pavement. This requires more frequent cleaning and, at some seasons, a continuous patrol not otherwise required.

The development of design and practice as they relate to removal and disposal of water from the road surface has reached a stage of thorough effec-

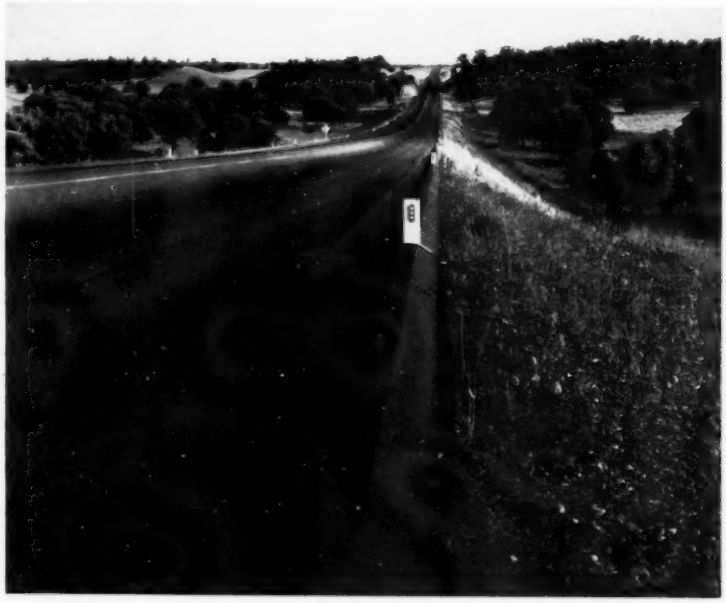


FIGURE 4
Four Lanes Tapering to Two with Machine-Shaped and Finished Drainage Dike and Reflectorized Guide Posts

tiveness. There remains the matter of selection of type and of standardizing the shape. In areas where snow is removed in the winter, the low plant-mixed dike on fills is the more desirable, although this advantage is of lesser importance where the shoulder width is five feet or more. The paved gutter through cuts is satisfactory in snow removal areas only where a paved shoulder width of not less than five feet is available for storage. In the open range country where stock may be on any unfenced highway, less damage will be done to the plant-mixed dikes, particularly those compacted by a finishing device equipped with a heater.

Durable Dikes

In much of the State, vegetation will break through a two-inch facing of plant-mix on an earth dike. This will not occur so readily, if at all, where all plant-mixed dikes are used. Quite generally, in District II, the all plant-mixed dikes have been found to be more durable, more sightly, and more serviceable than any other type and to be well worth the small additional cost.

When the shape and dimensions of these drainage devices become sufficiently standardized so that contractors may design equipment for their construction with assurance that it need not be remodeled for each job, the cost of these drainage facilities may be expected to decrease and a permanent and economical solution will have become established for what has grown from a minor to a major drainage problem on state highways.

FIGURE 5
Plant-Mixed, Machine-Shaped and Finished Drainage Dike. Reflectorized Guide Posts Outline Road Edge Even in the Fog

Grange Asks Long-Range Highway Planning

THE National Grange, in its 82nd annual convention at Portland, Maine, adopted a seven-point statement of highway transportation principles in which it reaffirms its support of long-range highway planning in the states and rejects the use of tolls as a highway financing measure.

The program recommended includes:

(1) Liberalization of federal standards for secondary roads; (2) creation of legislative committees in the states, with highway user representation, to study highway needs; (3) uniform motor vehicle laws in all states; (4) passage of anti-diversion amendments to protect highway funds from non-highway use; (5) uniform size and weight laws for commercial vehicles; (6) building of free roads rather than toll roads; (7) opposition to so-called "integration" of transportation.

On the last point the Grange said, "Since serious consideration may be given to this subject in the next Congress, we reaffirm our stand of previous years in opposition to such integration and recommend that competition among the various forms of transportation should continue to exist in the future."

Testimonial of Appreciation

— by the —

National Crushed Stone Association

— to —

Nathan C. Rockwood

Whereas, Nathan C. Rockwood, has for over thirty years been prominently identified with the editorial activities of ROCK PRODUCTS and of recent years has been its Editor in Chief; and

Whereas, Rocky, as he is affectionately known throughout the industry, has relinquished his editorial responsibilities and is now serving as an elder statesman for that publication and in such capacity continues to give us inspiring and helpful editorials and messages, and

Whereas, during these many years there have flowed and are continuing to flow from his prolific and capable pen words of encouragement and caution, words of praise and constructive criticism; and

Whereas, he has not only through the written word intelligently and sympathetically discussed our problems, but has also on many occasions at our annual conventions and other Association meetings advocated sound business principles and generously given counsel from his wealth of knowledge and experience; and

Whereas, he was one of the founders of the Manufacturers' Division of the National Crushed Stone Association and served capably for many years as its Secretary and by his inspirational thought did much to develop the success of that Division to the marked benefit of the Association; and

Whereas, it has been deemed fitting that our grateful appreciation to him for his devotion to our welfare be appropriately, even though inadequately, acknowledged; and

Whereas above all else he has been a loyal and faithful friend to all of us: Therefore be it

Resolved, That the Board of Directors of the National Crushed Stone Association, on behalf of the entire membership, hereby expresses to Nathan C. Rockwood its recognition of his outstanding and unselfish service to the Association and to the entire industry; and be it further

Resolved, That a copy of this resolution in appropriate form be presented to him as a testimonial of our personal affection, our highest esteem and with a keen understanding of his value to our industry.

Adopted by the Board of Directors of the National Crushed Stone Association at its meeting at Hot Springs, Virginia, on July 8, 1945

J. R. Boyd
Secretary

NATIONAL CRUSHED STONE ASSOCIATION · NCSA · 1918 ·

W. L. Weston Jr.
Chairman of the Board

NCSA Presents Testimonial To Nathan C. Rockwood

AN EVENT took place at the midyear meeting of the Board of Directors of the National Crushed Stone Association held at Hot Springs, Virginia, on July 8, 1948, which should give genuine pleasure to the host of friends of Nathan C. Rockwood, affectionately known as "Rocky" throughout the crushed stone industry. The following extract from the minutes of that meeting probably best describes the ceremony.

"With appropriate introductory remarks, Russell Rarey, as Chairman of a Special Committee composed of Otho M. Graves, Cottrell Farrell, representing the Manufacturers Division, and H. C. Krause, representing the Agricultural Limestone Institute, presented the following resolution and moved its adoption. (Editor's note: The resolution is reproduced in full on the opposite page.)

"With an enthusiastic chorus of seconds, the resolution was unanimously adopted. Whereupon Mr. Rarey presented to "Rocky" a framed copy appropriately inscribed and beautifully illuminated.

"In accepting the testimonial, Mr. Rockwood stated that he had never felt he needed any reward other than the friendship he had enjoyed among members of the Association. He stated that he was present at the first meeting of the Association together with Mr. Savage, whom he believed to be the only active member who had served continuously on the Board for over thirty years.

"Mr. Rockwood most interestingly reminisced about the early days of the Association, recalling that when he used to visit Mr. Sandles, the first Secretary of NCSA and also Secretary of the Ohio Macadam Association, he saw hanging on the wall a drawing depicting two or three men in striped suits breaking stones with sledge hammers, with balls and chains on their legs, and having the inscription, 'Ohio Stone Breakers Association.' This he felt reflected as of that time the sentiment of crushed stone producers toward their own industry, indicating a lack of self-esteem and industry esteem.

"Mr. Rockwood complimented Mr. Graves for the fine work which he had done over the years in bringing to crushed stone producers a sense of pride in their Association and in the industry of which they are a part."

Federal Control of Stream Pollution Approved[1]

AFTER fifty years of controversy, Congress has approved federal control of stream pollution. Under the new Barkley-Taft Water Pollution Control Act, the Public Health Service will survey U. S. rivers and streams, and polluters may be forced to clean up their discharged wastes. If corrective measures are not taken, the federal government, with the approval of the state, may sue non-cooperators.

Funds will support the Public Health Service and Federal Works Agency programs, as well as investigations and some corrective construction. A million dollars a year will be available as grants to states, cities, and other public agencies for engineering and economic investigations. During each of the next five years, funds may also be loaned to assist public agencies in building control facilities to prevent untreated sewerage from entering waterways. The states will also cooperate in more fundamental research, and another million dollars annually may be used for subsidiary investigations.

Past delay in correcting stream pollution can be attributed partly to industrial parsimony and partly to conflicting legal jurisdictions, but principally to the cost of treatment facilities and to the lack of fundamental data upon which to base corrective processes. The new legislation alleviates somewhat the economic problem by making loans available to state and local governments, who in turn are to assist industry. These loans are made through the Federal Works Agency, with the approval of the state water pollution agency and the Surgeon General. The maximum loan is either $250,000, or one-third the estimated cost of the project, whichever is less.

No accurate estimate can be made of the cost of eliminating present industrial pollution in this country. As a result of a recent survey, however, the Public Health Service estimates that an investment of about $8 billion will be necessary for water supplies, sewerage, garbage and refuse disposal, and rural sanitation, without including treatment of industrial waste. That industry will have to spend a comparable amount can be predicted from the program of the synthetic rubber industry, which spent nearly $14 million during the war to treat waste from various plants.

[1] From *Industrial Bulletin No. 247*, October 1948, Arthur D. Little, Inc., Cambridge, Mass.

Survival Values in the Free Enterprise System[1]

A QUESTION being raised by increasing numbers of people is whether the free enterprise system can survive in the United States against the rising tides of authoritarian and socialist doctrine in every other corner of the world.

The statement of the question differs in terms and inflexion, depending, of course upon the interest of the party who asks it. To some, the tone is rhetorical and presumes a chorus of yes's or no's. In other instances, a note of anxiety can be detected from those in evident need of reassurance. In many cases, the question is raised in a candid spirit of critical evaluation and out of deep concern for the values inherent in the operation of business community. Faced as we are with a revolution of organizing forces elsewhere in the world, there is need for a searching appraisal of the sources of our own strength and of our capacity for survival.

It is inevitable that a clash of values abroad must figure in some degree in the opinions formed by critical people at home. It is clear, also, that in the years immediately ahead, both the attitudes of businessmen and their performance as the managers of a "system" will be appraised more searchingly than ever before. Admittedly, the sound of expressed criticism is largely drowned out by current levels of prosperity; and it is likely that continued prosperity for the predictable future will result from the grim necessity of economic (and other) types of aid to our friends abroad.

The danger is that the leadership of the business community may take more comfort than is justified from such considerations; and that—consoled by high production, high wages, and high living—may ignore the quality of valid criticism altogether, or respond in terms that are superficial or extreme or strident.

Free Enterprise Competes With Other Systems

The plain fact is that the free enterprise system in the United States has long since entered a period of deadly competition with other systems of economic organization. As tensions continue to mount, even more penetrating questions will be directed at the management of American business and at the values inherent in the methods of its operation. The issue, therefore, is not so much the terms in which these questions will be put but the reaction of business management to being criticized and the terms in which they are willing to be tested by the faith which they profess.

In this deadly contest with other systems, free enterprise is competing—primarily—for the good opinion of the common people of the world. Markets, preferences, the paraphernalia of the Marshall Plan, and the apparatus of commercial and military alliance—all of these are unimportant except in terms of the final verdict of that numberless jury. It is for them that most of the questions will be angled; and they are the ones to whom the answer must make sense.

Most advocates of the free enterprise system are moved to cite the record of its growth and prosperity in the United States as "proof" of its effectiveness. Critics are apt to stress the inequalities of its benefits, and—recalling the violent swings of the business cycle—ask for proof that such fluctuations can be stopped.

Plainly, no debate can clarify the issues if carried on from such extreme and fixed positions. The more important question is whether there are concepts within the system giving it capacities for continued growth; and whether the processes of growth can take place in such ways as to promise greater equality in the distribution of the benefits and fewer risks of boom and depression along the way.

It may well be that in the years immediately ahead, the greatest service of this country to the world will consist in the example of unity it can provide among the great regions, groups, and interests which make up our national life. Unity in this sense and among a free people can only result from substantial agreement as to our basic directions and drives. This agreement, in turn, can only be purchased at the price of patience in negotiation and restraint in the assumptions we make as to the motives of those who may disagree with us. In this spirit, the advocates of our system need not be goaded into attempts to justify publicly deficiencies and abuses which they would surely deplore in private; and contrariwise, the severest critics need not lose the force of the telling points they sometimes

[1] Reprinted from *Cost and Profit Outlook*, October 1948, Alderson & Sessions, Philadelphia, Pa.

make by attempting to discount, subvert, or altogether ignore the admirable achievements of our capitalist and free enterprise economy.

For business management, an urgent sense of public accountability cannot be postponed with safety until times of crisis. Then—is no time to make a special effort to "sell" the system, or to invoke new loyalties in its feasibility. The challenge is an immediate one for those who believe our record is strong enough to stand criticism—and that our system itself is resilient enough to profit from it.

Why not put the accent on the positive? The analogy is quite clear in the case of the individual company. More than one progressive management has succeeded in cementing the loyalties of its personnel by making it clear that criticism is constructive as a process, and is welcome as an aid to the growth and profit of the company. The principle is no different for the business community as a whole.

Private Management is Now a Public Issue

Much as one might wish it otherwise, Private Management is now a Public Issue. To some degree it follows that each Private Manager is something of a Public Figure. The reactions and attitudes he brings to the daily decisions of his own enterprise are significant beyond the grist of the day's work. He is engaged in creating—or dissipating—the understanding and good will through which freedom of enterprise is linked with all of the other freedoms.

The stakes are very high. If the international crisis should lead to war, or if our economy is troubled by a deep recession, our country's greatest asset will not consist of its matchless industrial organization. At such times—as in the past—our strength will come from a faith broadly shared and loyalty deeply felt in the values which animate our system.

When the chips are down the common people of the world will be "sold" on the basis that the values in our system are strong enough to survive; and that the results of its survival will accrue, increasingly, to their advantage.

$50 Million More Yearly for Roads

FEDERAL Works Administrator Fleming plans to ask Congress for $50 million more federal highway aid annually under the present two-year, $450 million a year program. He said that highway construction was increasing, and that the government expects to exhaust its funds for the current fiscal year before that year ends in June.

Edward G. Lewis
1872—1948

EDWARD G. LEWIS, familiarly known by his host of friends throughout the crushed stone industry as "Ed", died at his home in Jackson Heights, Long Island, N. Y., on October 3, 1948.

Ed was prominently identified with the Manufacturers Division of the National Crushed Stone Association for many years. He was first elected to its Board of Directors in 1926, became a Vice Chairman in 1927, and a Representative of the Division on the NCSA Board of Directors in 1928. In 1929 he was elected Chairman of the Division, an honor which he richly deserved for his enthusiastic and helpful assistance during the early days of the Division's development. Throughout his active participation in the affairs of NCSA he was ever willing to be helpful and will long be remembered for his friendly and genial personality.

Ed joined the Sales Department of the Bucyrus-Erie Company in 1912, became Manager of the Chicago District Office and for nearly twenty years served as Manager of the Eastern District Sales Office in New York.

He is survived by his widow, Mrs. Carolyn V. Lewis, who resides at 3422 81st St., Jackson Heights, Long Island, N. Y. Deep and heartfelt sympathy is extended to Mrs. Lewis in her bereavement.

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